Claims 6, 14, 15, and 18 have been canceled. Claims 1, 7, 13, 16, 17, 19, and 27-29 have been amended. New claims 30-31 have been added. No new matter has been introduced. Support for the text added to claims 1, 13, and 16 is found in the specification as originally filed. See, e.g., page 6, lines 10-23, of the specification. The new claims are identical to original claims 14-15, and are presented to merely rearrange their order in the claim set.

With these amendments, claims 1-3, 5, 7-13, 16, 17, and 19-31 are pending.

Claim Objections

Claims 14 and 15 have been canceled and represented as new claims 30-31 so that they "limit the subject matter of a previous claim."

Claims 27-29 have been amended so that they are properly dependent on claim 16.

Rejection under 35 U.S.C. § 112, 2nd paragraph

Claims 6, 7, 18, and 19 stand rejected under the second paragraph of 35 U.S.C. § 112 for their recitation of the term "Mexican-hat shape." The Applicants do not agree with the Examiner's contention that there is no standardized meaning for this term. On the contrary, one skilled in the art would understand that a "Mexican hat" shape is a function that has the shape of the negative normalized second derivative of a Gaussian function. Nevertheless, to expedite prosecution, claims 6 and 18, which recited the term, have been canceled and the dependencies of claims 7 and 19 changed to claims 5 and 17, respectively. Applicants respectfully submit that the claims as amended meet the requirements of § 112.

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<u>Rejection under 35 U.S.C. § 102(b)</u>

Claims 1-3, 10, 13, 14, 16, 22 and 24-27 stand rejected under 35 U.S.C. § 102(b) as allegedly being anticipated by U.S. Patent No. 5,597,380 (McDermott et al.). Applicants respectfully disagree.

Applicants have amended independent claims 1, 13, and 16 to clarify that the initial determination of which electrodes to stimulate and the timing of those stimulations are made "using a base stimulation strategy". This amendment clarifies that the determination of the initial activation time in the first part of the method is independent of the addition of the temporal adjustment. The advantage of this approach is clearly set out in the specification on page 6, at lines 10-23. These paragraphs are reproduced below for the convenience of the Examiner.

> *The invention provides a method for processing the stimulation sequences resulting from existing sound processing strategies to generate stimuli for application by an auditory prosthesis including an array of stimulation devices, the method entailing the introduction of delay in stimulation time for devices depending on their stimulation amplitude compared to the stimulation amplitude proximate devices. The time of activation of a stimulation device is obtained from the time normally used by the base stimulation strategy and a latency function.*
>
> *Physiological data show that if a delay is introduced (irrespective of that already introduced to compensate for travelling wave) to frequencies which are not important then information of importance such as formants in speech or signals in noise will be sent to brain sooner and this will aid in their identification and improve speech recognition. This delay may be particularly important for speech perception in noise as the neural elements involved in this processing respond best to noise. A mechanism also exists to enhance this delay further through bilateral inhibitory connections between cochlear nuclei.*

Specification, page 6, at lines 10-23.

By contrast, Mc Dermott et al. only teach the claimed "base strategy", and do not teach the use of a separate temporal adjustment after application of that base strategy. It is incorrect to argue that McDermott's amplitude based ordering is a "temporal adjustment" within the scope of the claim. McDermott teaches a method for constant rate non-simultaneous stimulation, thus the temporal ordering of stimulations is a

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mechanism for dealing with contention that is essential to the operation of the base stimulation strategy of McDermott, rather than something that is separate to the base strategy.

Anticipation requires that a single reference teach each and every limitation of a claim. That requirement is not met here. The teaching of McDermott et al. lacks the temporal adjustment required by the claims.[1] Thus, the claims are not anticipated by McDermott et al. Applicants respectfully request reconsideration and withdrawal of the § 102(b) rejection.

Rejections under 35 U.S.C. § 103(a)

Claims 5 and 17 stand rejected under 35 U.S.C. § 103(a) for allegedly being unpatentable over McDermott et al. in view of U.S. Patent Publication US 20010031909 (Faltys et al.). Applicants respectfully disagree.

In his argument that the claims are obvious, the Examiner asserts that Faltys et al. teaches the use of a weighted sum of proximate stimuli to apply a temporal adjustment to activation times. The Applicants respectfully submit that this is not correct.

Faltys et al. presents a strategy for determining which set of electrodes should be simultaneously stimulated in an N-of-M strategy. In Faltys, this involves N *groups* of M *groups*. This is a different approach and, as a result, the delays present by Faltys are effectively contention management, not an added delay.

Faltys appears to calculate a weighted sum of the sound energy of a group of electrodes and compares that with the weighted sum of other groups of electrodes and then orders them. This is different than the claimed invention where a single stimulation is compared to the weighted sum of a group of electrodes not including itself.

Faltys et al. does not consider the relative positions of the groups of electrodes, there is no limitation that a group of electrodes is compared to only proximate electrodes. A group may be compared to another group made up of stimulation devices

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[1] Faltys et al., discussed in more detail below in connection with the rejection under 35 U.S.C. § 103(a) suffers from the same deficiency as McDermott et al.

that are widely separated from the first group. Thus proximity of the groups has no place in the Faltys teaching.

Because the Examiner's interpretation of Faltys et al. is faulty, his conclusion is incorrect as well. The invention claimed in claims 5 and 17 is not obvious in view of McDermott et al. and Faltys et al.

Claims 11, 12, 15, and 23 stand rejected under 35 U.S.C. § 103(a) as being obvious over McDermott et al. taken in view of U.S. Patent Publication US 20040078057 (Gibson). Applicants respectfully disagree. The deficiencies in McDermott et al. are not corrected by the Gibson disclosure. Applicants do not believe this issue needs to be addressed in view of their comments above.

Applicants respectfully request reconsideration and withdrawal of the rejections of claims 5, 11, 12, 17, and 23 based on 35 U.S.C. § 103(a).

Allowance of the claims and passage of the case to issue are respectfully solicited. The Applicants urge the Examiner to contact the Applicants' undersigned representative at (312) 913-2136, if he believes that a discussion would expedite prosecution of this application.

Respectfully submitted,

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